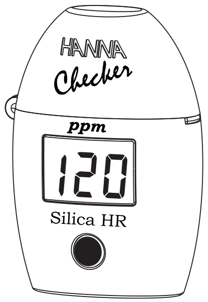
HI 770

Silica High Range



www.hannainst.com

Dear Customer,

Thank you for choosing a Hanna Instruments Product.
Please read this instruction manual carefully before using the instrument. If you need additional technical information, do not hesitate to e-mail us at **tech@hannainst.com**.

Preliminary examination:

Please examine this product carefully. Make sure that the instrument is not damaged. If any damage occurred during shipment, please notify your Dealer.
Each **HI 770** meter is supplied complete with:

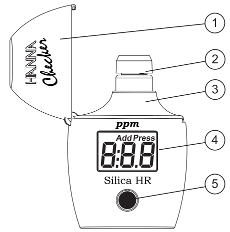
- Two Sample Cuvettes and Caps
- Reagents for six tests
- 1 x 1.5V AAA Battery
- Instruction Manual

For more details about spare parts and accessories see "Accessories".

Technical specifications:

Range	0 to 200 ppm
Resolution	1 ppm
Accuracy	±2 ppm ±5 % of reading @ 25 °C / 77 °F
Typical EMC Dev.	±1 ppm
Light Source	Light Emitting Diode @ 470 nm
Light Detector	Silicon Photocell
Method	Adaptation of the USEPA METHOD 370.1 and Standard Method 4500-SiO_2 C.
Environment	0 to 50 °C (32 to 122 °F); max 95% RH non-condensing
Battery Type	1 x 1.5V AAA
Auto-Shut off	After 10 minutes of non-use.
Dimensions	81.5 x 61 x 37.5 mm (3.2 x 2.4 x 1.5")
Weight	64 g (2.25 oz.)

Functional description:



1. Dust cover.
2. Cuvette with cap.
3. Cuvette holder.
4. Liquid Crystal Display.
5. Button

Errors and warnings:



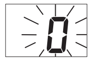
Light High: There is too much light to perform a measurement. Please check the preparation of the zero cuvette.



Light Low: There is not enough light to perform a measurement. Please check the preparation of the zero cuvette.



Inverted cuvettes: The sample and the zero cuvette are inverted.



Under range: A blinking **"0"** indicates that the sample absorbs less light than the zero reference. Check the procedure and make sure you use the same cuvette for reference (zero) and measurement.



Over Range: A flashing value of the maximum concentration indicates the reading is over range. Dilute the sample and re-run the test.



Battery low: The battery must be replaced soon.



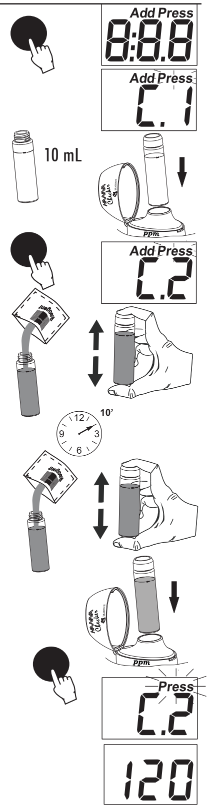


Dead battery: This indicates that the battery is dead and must be replaced. Once this indication is displayed, normal operation of the instrument will be interrupted. Change the battery and restart the meter.

Measurement procedure:

- Turn the meter on by pressing the button, all segments will be displayed. When the display shows "**Add**", "**C.1**" with "**Press**" blinking, the meter is ready.
- Fill the cuvette with 10 mL of unreacted sample and replace the cap. Place the cuvette into the meter and close the meter's cap.
- Press the button. When the display shows "**Add**", "**C.2**" with "**Press**" blinking the meter is zeroed.
- Remove the cuvette from the meter and unscrew the cap. Add of one packet of **HI 770A-25** reagent. Replace the cap and shake gently until the reagent is completely dissolved.
- Unscrew the cap and add of one packet of **HI 770B-25** reagent. Replace the cap and shake <u>vigorously until the reagent is completely dissolved</u>. Wait for 10 minutes.
- Unscrew the cap and add one packet of **HI 770C-25** reagent. Replace the cap and shake vigorously until the reagent is completely dissolved. Place the cuvette into the meter. Wait 2 minutes and press the button.
- The instrument directly displays concentration in mg/L of silica on the LCD. To convert the reading to mg/L of silicon (Si) multiply the reading by 0.467.

  The meter automatically turns off after 10 minutes.



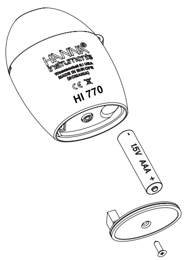
Tips for an accurate measurement

- It is important that the sample does not contain any debris.
- Whenever the cuvette is placed into the measurement cell, it must be dry outside, and completely free of fingerprints, oil and dirt. Wipe it thoroughly with **HI 731318** or a lint-free cloth prior to insertion.
- Shaking the cuvette can generate bubbles, causing higher readings. To obtain accurate measurements, remove bubbles by swirling or by gently tapping the cuvette.
- Do not let the reacted sample stand for too long after reagent is added, as accuracy will be affected.
- After the reading it is important to immediately discard the sample, otherwise the glass might become permanently stained.

Battery management

To save the battery, the instrument shuts down after 10 minutes of non-use.
One fresh battery lasts for a minimum of 5000 measurements. When the battery is dead the instrument will display "**bAd**" then "**bAt**" for 1 second and then turns off.
To restart the instrument, the battery must be replaced with a new one.
To replace the instrument's battery:

- Turn the instrument off by holding the button until the meter shuts off.
- Turn the instrument upside down and remove the battery cover with a screwdriver.



- Remove the battery from its location and replace it with a new one, inserting the negative end first
- Insert the battery cover and replace the screw with a screwdriver.

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Accessories:

<u>REAGENT SETS</u>

HI 770-25	Reagent set for 25 tests

<u>OTHER ACCESSORIES</u>

HI 770-11	Silica HR Certified Standard Kit
HI 740028	1.5V AAA batteries (4 pcs)
HI 731318	Cloth for wiping cuvettes (4 pcs)
HI 731321	Glass cuvettes (4 pcs)
HI 731225	Cuvette cap for checker HC (4 pcs)
HI 93703-50	Cuvette cleaning solution (230 mL)

Recommendations for Users

Before using this product, make sure that it is entirely suitable for your specific application and for the environment in which it is used.
Operation of this instrument may cause unacceptable interferences to other electronic equipment, thus requiring the operator to take all necessary steps to correct interferences.
Any variation introduced by the user to the supplied equipment may degrade the instrument's EMC performance.
To avoid damage or burns, do not put the instrument in microwave oven. For the safety of you and the instrument do not use or store the instrument in hazardous environments.

For additional information, contact your dealer or the nearest Hanna Customer Service Center. To find a Hanna Office in your area, visit our web site:

<u>www.hannainst.com</u>

HANNA® instruments